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METHODS AND APPARATUS FOR UTILIZING RADIO FREQUENCY SPECTRUM SIMULTANEOUSLY AND CONCURRENTLY IN THE PRESENCE OF CO-CHANNEL AND/OR ADJACENT CHANNEL TELEVISION SIGNALS BY ADJUSTING TRANSMITTER POWER OR RECEIVER SENSITIVITY

Abstract of the Disclosure

To address the scarcity of radio frequency (RF) spectrum, the disclosed systems offer unique ways to mitigate interference between television broadcasters (including their direct audience and viewers served via cable television) and other concurrent users of the RF spectrum, e.g. for one-way or two-way wireless communication. A preferred embodiment makes use of the "framing" characteristics of the "letterbox" video display format. RF emissions of the simultaneous RF spectrum user are keyed "on" only or substantially only during the time intervals when the blanking intervals and/or letterbox-border video lines are being scanned on the display, i.e. when the potentially affected (interfered with) television display is in the letterbox-frame-scanning portions of each video field. The concurrent uses may support services for voice (including telephony, music etc.), data (including Internet, intranet, etc.); image or control; fixed, portable, mobile or nomadic; narrowband, broadband or ultra-wideband; radiodetermination, diathermy, etc. Additionally, the concurrent user's emitted power and receiver sensitivity is continuously adjusted according to the broadcast television signal.